

REMARKS

Claims 1, 4-6, 8-14, 16-19, 21-26, 29, and 31-33 are currently pending. Claims 1, 29, and 31 have been amended, leaving claims 4-6, 8-14, 16-19, 21-26, and 32-33 unchanged.

The Examiner rejected claims 1, 4-6, 8-14, 16-19, 21-26, 29, and 31-33 under 35 U.S.C. §112, first paragraph. Specifically, the Examiner argues that the limitation that the tool element may be removed without disturbing the position of the drive mechanism is not supported in the specification.

While Applicants disagree with this conclusion, Applicants have amended the claims to remove this limitation to expedite prosecution.

In light of the foregoing, Applicants respectfully request the withdrawal of the 35 U.S.C. §112 rejections.

The Examiner rejected claims 1, 4-6, 8-10, 13, 16-19, 21-26, 29, and 31-33 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,414,893 (Hampton) in view of U.S. Patent Publication No. 2002/0104185 (Weber).

Amended claim 1 recites, among other things, an upper housing portion movable relative to the lower housing portion between a closed position for use and an open position in which airflow passages within the head are opened from above, wherein the head is provided with at least one catch to retain the upper housing portion in the closed position and releasable to move the upper housing portion into the open position, and a rotatably mounted tool element which is entirely exposed from above and in front of the tool element and readily removable when the upper housing portion is in the open position, wherein the tool element is directly driven by a drive mechanism comprising a drive belt having internal and external surfaces, wherein the drive belt does not pass around the tool element and the external surface directly engages the tool element, and wherein no portion of the drive mechanism is positioned above the tool element such that the tool element is readily removable in an upward direction through the open upper housing portion.

Hampton does not teach or suggest, among other things a drive belt that does not pass around the tool element and has an external surface that directly engages the tool element, wherein no portion of the drive belt is positioned above the tool element such that the tool element is readily removable in an upward direction through the open upper housing portion.

Rather, Hampton discloses a vacuum cleaner with a removable brush 26. The brush 26 is driven by a motor 24 and a belt 76 that wraps around the brush 26. Thus, the belt both wraps around the brush and includes a portion disposed above the brush. The Examiner acknowledges that Hampton fails to teach a drive belt that does not pass around the tool element.

Weber does not cure the deficiencies of Hampton. Weber discloses a suction nozzle that includes two agitators. With reference to Fig. 12, the agitators are rotated or driven by a motor, pulley, and belt arrangement. The belt 110 is held in position by the placement of the pulley 100, the idler gears 108, 112, and the agitators 114, 116. The belt 110 wraps around the first agitator 114 and is positioned above the second agitator 116.

In light of the foregoing, Hampton and Weber, alone or in combination, do not teach or suggest each and every limitation of claim 1. As such, claim 1 is allowable over Hampton and Weber. Claims 4-6, 8-14, 16-19, and 21-26 depend from claim 1 and are allowable over Hampton and Weber for these and other reasons.

Amended claim 29 recites, among other things, an upper housing portion secured to the connector, wherein the lower housing portion provides support for a rotatably mounted brush bar, and the upper housing portion is pivotable relative to the lower housing portion between a closed position and an open position in which the brush bar is entirely exposed from above and in front when the upper housing portion is in the open position, wherein the brush bar is driven by a drive mechanism comprising a series of gears, wherein the brush bar is rotated without any component passing around the brush bar, wherein no portion of the drive mechanism is positioned above the brush bar such that the brush bar is removable from above and in front of the drive mechanism.

Hampton does not teach or suggest each and every limitation of claim 29. As noted, Hampton discloses a vacuum cleaner with a removable brush 26 driven by a motor 24 and a belt 76 wrapped around the brush 26. Hampton says nothing of a brush bar driven by a drive mechanism comprising a series of gears, much less the other limitations of claim 29.

Weber does not cure the deficiencies of Hampton. With reference to Fig. 13 of Weber, a plurality of agitators 135 and 136 are driven by a worm gear 128 positioned above the agitators 135, 136. The threaded portion of the worm gear 128 is engaged with threaded portions of the agitators 135, 136 such that rotation of the worm gear 128 causes rotation of

the agitators 135, 136. There is no teaching or suggestion of positioning the worm gear anywhere but directly above the agitators 135, 136.

In light of the foregoing, Hampton and Weber, alone or in combination, do not teach or suggest each and every limitation of claim 29. As such, claim 29 is allowable.

Amended claim 31 recites, among other things, a drive mechanism that includes a drive belt comprising an internal and an external surface, wherein the drive belt does not pass around the tool element, and the tool element is driven by the external surface of the drive belt, wherein the drive belt defines a loop and the brush bar is positioned outside of and adjacent to the loop such that no portion of the drive mechanism is positioned above the brush bar such that the brush bar may be removed from above and in front of the drive belt.

Hampton does not teach or suggest each and every limitation of claim 31. Rather, Hampton discloses a vacuum cleaner with a removable brush 26. The brush 26 is driven by a motor 24 and a belt 76 that wraps around the brush 26. The Examiner acknowledges that Hampton fails to teach an arrangement in which the drive belt does not pass around the tool element.

Weber does not cure the deficiencies of Hampton. As noted, Weber discloses a suction nozzle that includes two agitators 114, 116. With reference to Fig. 12, the agitators are rotated or driven by a motor, pulley, and belt arrangement. The first agitator 114 is positioned inside a loop defined by the drive belt 110, and the second agitator 116 is positioned outside and below the loop defined by the drive belt 110. Thus, there is no agitator that is positioned such that it is not surrounded by a belt or positioned beneath the drive mechanism.

In light of the foregoing, Hampton and Weber, alone or in combination, do not teach or suggest each and every limitation of claim 31. As such, claim 31 is allowable. In addition, claims 32 and 33 depend from claim 31 and are allowable for these and other reasons.

The Examiner rejected claims 11 and 12 under 35 U.S.C. §103(a) as being unpatentable over Hampton in view of Weber and further in view of U.S. Patent No. 3,924,085 (Stone).

Claims 11 and 12 depend from claim 1 and add additional limitations. As discussed, Hampton and Weber, alone or in combination, do not teach or suggest each and every limitation of claim 1, much less those of claims 11 or 12.

Stone does not cure the deficiencies of Hampton and Weber. The Examiner cited Stone for the teaching of a safety start device for domestic appliances wherein a switch is provided on part of the housing. The switch is operable to disconnect power to the components of the appliance to prevent operation when the door of the appliance is in an opened position. The Examiner does not allege, nor does Stone teach or suggest, a tool element driven by a drive mechanism that includes a drive belt that does not pass around the tool element and has an external surface that directly engages the tool element, and wherein no portion of the drive mechanism is positioned above the tool element such that the tool element is readily removable in an upward direction through the open upper housing portion.

In light of the foregoing, Hampton, Weber, and Stone, alone or in combination, do not teach or suggest each and every limitation of claim 1. As such, claim 1 is allowable over Hampton, Weber, and Stone. In addition, claims 4-6, 8-14, 16-19, and 21-26 depend from claim 1 and are allowable over Hampton, Weber, and Stone for these and other reasons.

The Examiner rejected claim 14 under 35 U.S.C. §103(a) as being unpatentable over Hampton in view of Weber and further in view of U.S. Patent Publication No. 2001/0008036 (Worwag).

Claim 14 depends from claim 1 and adds additional limitations. As discussed, Hampton and Weber, alone or in combination, do not teach or suggest each and every limitation of claim 1, much less those of claim 14.

Worwag does not cure the deficiencies of Hampton and Weber. Worwag discloses a vacuum cleaning tool that includes a brush roll 10 driven by an air turbine 12 and drive belt 16. The drive belt 16 is positioned such that it wraps around the brush roll 10.

In light of the foregoing, Hampton, Weber, and Worwag, alone or in combination, do not teach or suggest each and every limitation of claim 1. As such, claim 1 is allowable. In addition, claims 4-6, 8-14, 16-19, and 21-26 depend from claim 1 and are allowable for these and other reasons.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that claims 1, 4-6, 8-14, 16-19, 21-26, 29, and 31-33 are allowable.

The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,



Thomas J. Otterlee
Reg. No. 48,652

Docket No.: 025819-9040-00
Michael Best & Friedrich LLP
100 East Wisconsin Avenue
Milwaukee, Wisconsin 53202-4108

(414) 271-6560